

Amendment to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application:

1-13. (Canceled)

14. (Currently Amended) Use of a neural implant that enhances proliferation of neural tissue and minimizes scar formation comprising:

(a) obtaining a neural implantable device;

(b) coating the implantable device with a composite nanomaterial, said nanomaterial comprising carbon nanofiber material with nanofibers polymer/nanomaterial, wherein the nanomaterial component of said composite polymer/nanomaterial comprises carbon nanotubes of about out 2 to 200 nm in width that are functionalized with 4-hydroxynonenal and the polymer component of said composite polymer/nanomaterial comprises a polymer matrix; and

(c) securing the implantable device in the neural tissue where proliferation of neuronal tissue is desired.

15. (Currently Amended) Use of a neural implant that enhances proliferation of neural tissue and minimizes scar formation comprising:

(a) obtaining a neural implantable device comprising a composite nanomaterial, said nanomaterial comprising carbon nanofiber material with nanofibers polymer/nanomaterial, wherein the nanomaterial component of said composite polymer/nanomaterial comprises carbon nanotubes of about 2 to 200 nm in width that are functionalized with 4-hydroxynonenal and the polymer component of composite polymer/nanomaterial comprises a polymer matrix; and

(b) securing the implantable device in the neural tissue where proliferation of neuronal tissue is desired.

Claims 16-21 (Canceled).

22. (Currently Amended) The use in accordance with claim 15 wherein said composite polymer/nanomaterial is a polyurethane-carbon nanofiber nanotube composite.

Claims 23-25. (Canceled).

26. (Currently Amended) The use in accordance with claim [[23]]15 wherein the carbon nanotubes are aligned with one another.

27. (Currently Amended) Use of a neural implant that minimizes scar formation comprising:

(a) obtaining a neural implantable device, wherein said neural implantable device comprises a nanocomposite component, said nanocomposite comprising a polymer material and a nanomaterial carbon nanofiber, wherein said nanomaterial has a dimension ranging from 5 nm to less than 500 nmthe carbon nanofibers have a size in the range of about 10 nm to about 100 nm in width and length;

(b) implanting said neural implantable device in the neural tissue of a patient where proliferation of neuronal tissue is desired.

28. (Currently Amended) The use in accordance with claim 27, wherein said nanomaterial nanocomposite further comprises a plurality of nanoparticles disposed on said nanocomposite.

29. (Previously presented) The use in accordance with claim 27, wherein said polymer is selected from the group consisting of polyurethane, polymethacrylate, polyester, polyvinyl and any copolymers thereof.

30. (Currently amended) The use in accordance with claim 27 wherein the nanocomposite nanomaterial component comprises comprised of a polyurethane (PU)-carbon nanofiber (CN) composite.

31. (Canceled)

32. (Canceled)

33. (Currently Amended) The use in accordance with claim [[32]]27 wherein the nanofibers are multi-walled nanotubes.

34. (Previously presented) The use in accordance with claim 30 wherein the polyurethane (PU)-carbon nanofiber (CN) composites have a size in the range of about 50 to 100 nm and the composite comprises about 80:20 by weight percent carbon nanofiber to polyurethane.

35. (Previously presented) The use in accordance with claim 30 wherein the polyurethane (PU)-carbon nanofiber (CN) composites have a size in the range of about 60 to 100 nm and the composite comprises about 90:10 by weight percent carbon nanofiber to polyurethane.